

# Do we design with nature?

## Application of the concept of ecosystem services within the discipline of landscape architecture



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### Landscape architecture

- design and planning of our environment
- a discipline "concerned with the conservation and enhancement of landscape resources for the benefit of current and future" <sup>[10]</sup>



- + potential for the creation of sustainable design solutions
- + validation of designs by making decisions more explicit, transparent and measurable
- + determine the values of landscapes for stakeholders, and its supporting landscape structures
- + identify and assess ecosystem functions in designs and plans

### Ecosystem services

- goods and services that the natural environment provides to people
- way to connect ecological, social and economic values
- makes the relationship between human well-being and natural components of environment "explicit and measurable" <sup>[11]</sup>

- operationalize the ecosystem services concept <sup>[3,4,5,6,7,9]</sup>
- iterative design-oriented approaches key to support sustainable landscape adaptations for local communities <sup>[8]</sup>

Ecosystem services mentioned in articles on	0.6%	2.5%	4.2%	0.4%	0.5%
	landscape architecture	landscape design	landscape planning	urban planning	urban design

Based on a search into the academic literature database Scopus on the number of articles related to the terms: "ecosystem services", "landscape architecture", "landscape design", "landscape planning", "urban planning" and "urban design". The terms or a combination of terms were searched for in title, keywords or abstracts (8 June 2014).

Little evidence on explicit use of, or knowledge on, ecosystem services in landscape architecture practice, discourse, and education in Europe

Especially in urban planning and design, ecosystem services does not seem to be a topic (yet).

Landscape architecture: ...ecosystem services are **not a new idea** and already is applied in landscape architecture. According to Nassauer and Opdam <sup>[7]</sup> ecosystem services have been **part of the landscape architectural focus** for decades...

- use of **different terms** to describe ecosystem services
- Need for **approaches that fit better to landscape architects' needs and interests** to apply ecosystem services in landscape planning and design <sup>[1,2]</sup>

### Objective

To analyse:

- the **substantive and procedural** application of ecosystem services
- **definitions and terminology** used regarding the ecosystem services concept within contemporary landscape architecture, both as an academic discipline and as a profession, in **theory** and in **practice**.

To develop:

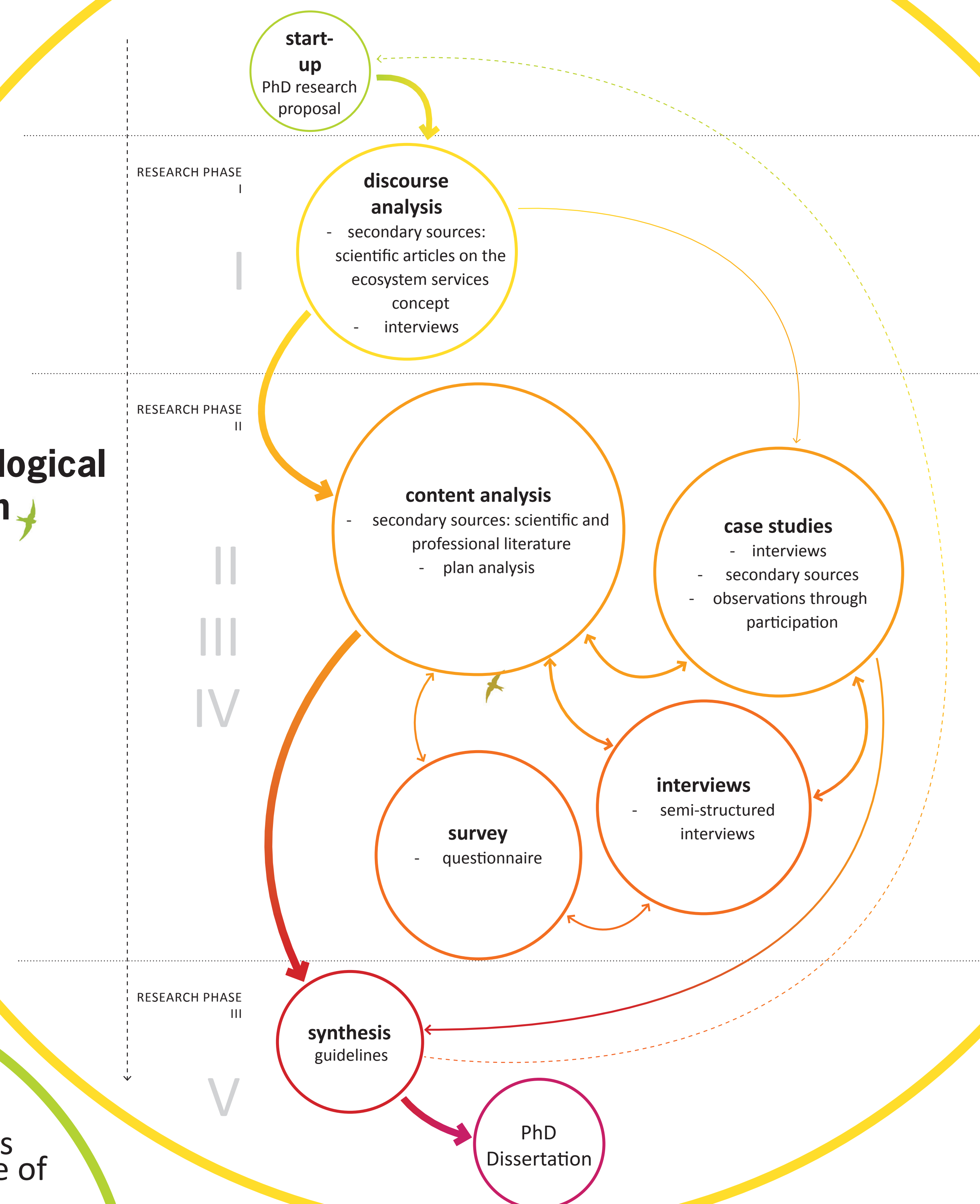
- **guidelines** to improve application of ecosystem services in landscape planning and design on local to landscape scale

### Research questions

How is the ecosystem services concept applied in the discipline of landscape architecture?

- What are the components of which the concept of ecosystem services is constructed?
- Which components of the ecosystem services concept are applied in contemporary landscape architecture (substantive knowledge)?
- Which definitions, terminology and concepts are used in contemporary landscape architecture to apply the ecosystem services concept and its components?
- Which methods and tools are used in landscape architecture to apply the ecosystem services concept in landscape planning and designing (procedural knowledge)?
- Which guidelines can be derived to improve the substantive and procedural application of the ecosystem services concept in landscape architecture?

### Methodological approach



### Relevance

- Improvement of communication and cooperation between designers, planners, researchers and scientists <sup>[1]</sup>
- Forming a base for establishing a common language
- Identifies knowledge gaps between landscape architecture and the ecosystem services
- Provides insight in how the saliency and legitimacy of developed methods and tools in ecosystem services can be improved to better suit the design process <sup>[7]</sup>

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